
WRIA 21 Strategy for Salmon Restoration

1.0 Introduction

Watershed Resource Inventory Area (WRIA) 21 encompasses the area along the Pacific coast of the Olympic Peninsula from Kalaloch Creek in the north to Connor Creek in the south, and includes the watersheds of the Queets/Clearwater, Quinault, Moclips, Raft, and Copalis Rivers, plus several small streams that flow directly into the Pacific Ocean. This WRIA contains some of the remaining free-flowing large rivers in the lower 48 states, and contains a large contiguous area of undisturbed habitat in the Olympic National Park (ONP). Aquatic and riparian habitats in WRIA 21 include areas that are relatively pristine and areas that have been greatly affected by logging and other land-use activities over the last century. Significant acreage is in the ownership of various governments, which have fish and habitat management responsibilities.

The following sections describe elements of an overall strategy for salmon restoration in WRIA 21. Application of this over all strategy will gradually restore salmon populations and the integrity of natural processes upon which they rely. However, salmon restoration in WRIA 21 will not be complete until our vision is achieved (see Section 2.0 *Vision*).

2.0 Vision

All of the watersheds in WRIA 21 contain healthy, diverse populations of salmon sustained by healthy ecosystems that are supported by undisrupted physical and biological processes, and contain abundant, contiguous aquatic and riparian habitats utilized by diverse, species-rich biological communities that support and service the cultural and other value-based needs of local stakeholders

3.0 Strategic Priorities

The Joint Citizen-Technical Committee developed this mission statement: "Our mission is to protect and restore physical and biological processes that benefit naturally spawning salmonids and their habitats." The Committee adopted a strategic approach to guide its activities and to form a basis for evaluating and rating potential restoration actions. The strategic approach is to encourage, design, and prioritize proposed restoration activities based on the following criteria:

- a. *Breadth of effect* – projects that are designed to have broad ecosystem or watershed level restoration effects are more beneficial than projects designed to affect limited, local waters, stocks, communities, or processes;
- b. *Certainty of success* – projects with a high certainty of success are more desirable than projects with a high or unknown level of risk for failure;

- c. *Response time* - projects that will have immediate or near-term restoration effects are more desirable than projects that require long-term methods or involve slow recovery processes; and
- d. *Measuring success* – projects designed to produce restoration results that can be easily monitored and measured are more desirable than projects designed to produce effects that are too diffuse, weak, or undefined to allow monitoring and evaluation.

4.0 Watershed Prioritization

There is considerable variation in salmon abundance, species diversity, and potential habitat capacity among watersheds within WRIA 21. This variation can affect levels of community support, biological impact and likelihood of success for any restoration efforts, especially when viewed from a WRIA-wide perspective. Therefore, the Committee grouped the watersheds by size and assigned associated priorities for project consideration. Watersheds in WRIA 21 fall conveniently into three categories; there are two large systems that dominate the Area, three intermediate size rivers with similar characteristics, and several small streams with independent entry into the Pacific Ocean. The Committee determined that system prioritization based on these categories is appropriate and applicable to its Vision, Mission, and strategic priorities.

High priority watersheds: the Queets and Quinault Watersheds are the largest in WRIA 21. They also contain the largest populations of salmon, the greatest species diversity and most complex ecosystems in the Area. As such, these watersheds also possess the greatest potential habitat capacity and are the most likely to benefit from activities directed toward restoration. Both watersheds have protected headwaters and form the largest contiguous intact headwaters habitat within WRIA 21.

Medium priority watersheds: the Moclips, Raft, and Copalis Rivers are intermediate size watersheds with substantial salmon populations and complex aquatic ecosystems. Each of these systems has significant potential for increased habitat capacity and would benefit from restoration activities. From an over all WRIA 21 perspective, the anticipated benefits from restoration would be intermediate.

Low priority watersheds: Connor, Joe, Camp, Whale, Kalaloch and other creeks, tributary to the Pacific Ocean, are small but numerous watersheds in WRIA 21. Most have small salmon populations and relatively simple ecosystems. Although each has potential for increased habitat capacity and local increases in salmon populations, the benefits from a WRIA-wide perspective would be small.

5.0 Project Prioritization

Individual proposed projects will be evaluated and prioritized based on their unique merits, potential benefits, and their consistency with the strategic priorities. The

primary factors that should be used for evaluating projects and guidelines for rating projects are:

- **Breadth of Effect** – Projects that will restore salmon populations and habitat productivity at large-scale, watershed, or ecosystem levels will be rated higher than projects that will restore production on a smaller, more limited scale. Projects that restore natural habitat forming physical and biological processes over a large part of a watershed will be rated higher than projects that only affect natural processes at specific locations. Restoration projects that will benefit salmon populations that were historically important in a watershed and are currently restricted or declining in abundance will be rated higher than projects that will benefit more widespread, stable salmon populations.
- **Certainty of Success** – Projects that have a low level of risk will be rated higher than projects that have a large or unknown level of risk. Risk in this context will include issues of scientific credibility, proven reliability, and the quantity or quality of assets at risk. A project based on sound scientific theory employing proven methods will be rated higher than projects based on untested theory or method. However, projects with a high risk of failure but a large potential benefit might be rated higher if the assets at risk are small.
- **Response Time** – Projects that will have an immediate or near-term beneficial effect on habitat capacity or salmon population trends will be rated higher than projects that will require repeated, long-term application of restoration methods, or that involve slower recovery processes with delayed benefits. In some instances when complex approaches are required for longer term recovery of a particular stock or watershed area, a portfolio of projects can be constructed. This portfolio can identify a cluster of projects and treatments needed to achieve the longer term recovery goals, but that have near-term measurable responses.
- **Measuring Success** – Projects that are designed to cause salmon stock or habitat capacity responses that are easily monitored and measured for evaluation will be rated higher than projects that affect populations or processes in ways that are difficult to monitor, measure and evaluate. The topic of how to measure progress and define success with respect to, salmonid restoration in WRIA 21 is under discussion. Metrics of success that have been discussed include projects that target priority species and watersheds, successful project implementation, community support, and trends in number and diversity of sponsors and projects. Of particular importance will be the development of technically-based metrics to quantify the amount of habitat recovery that was expected or achieved, and to estimate associated salmonid use or production increases.

Additional, secondary factors that can be addressed during project prioritization include the following subjects:

- **Stocks of Concern** - The Technical Committee will consider assigning some priority to projects that benefit unique salmonid stocks, stocks in decline, or ESA-listed species. The Technical Committee will consider this potential species prioritization at initial project identification and technical review steps, on a case-by-case basis.

- Assessments and data gaps - Available information on factors influencing biological productivity varies between watersheds in WRIA 21. Assessment projects will be considered if they address data gaps. Data gaps may be identified from watershed analyses and assessments, and by basin experts. Assessments will be given a higher priority if results will inform project development and provide a determination of probability of success for future projects. The Committee recognizes that more information, as it becomes available, may influence priorities for restoration actions.
- Other socioeconomic and cultural factors - The Committee recognizes that acceptable rationales for proposing and assigning additional weight to lower-priority projects can include high levels of community support, strong non-biological needs or benefits (such as flood and erosion control), and a buy-in to the over all restoration strategy by a more diverse array of stakeholders.

6.0 Selected Information Sources

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